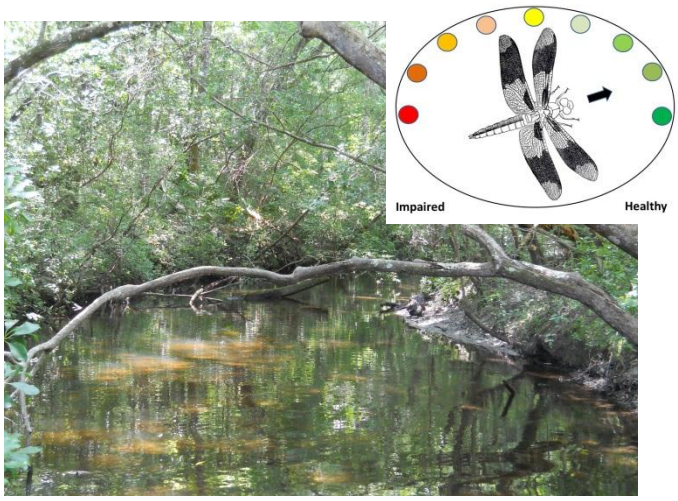
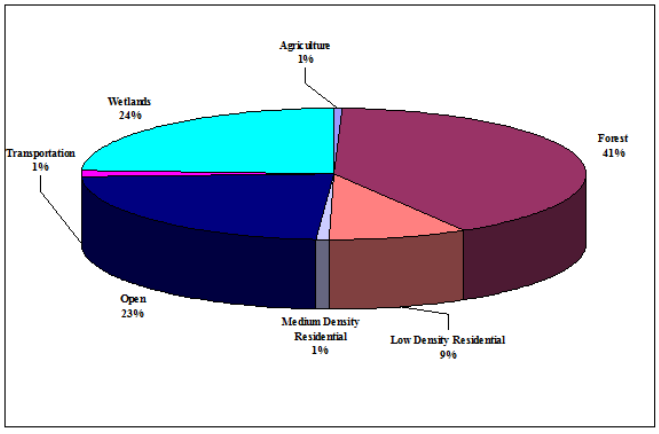
Waterbody: Harvey Creek



Basin: Ochlockonee River

Harvey Creek is a tannic, slightly acidic, phosphorus-limited stream that flows into Lake Talquin and is located in western Leon County.

While the following pie chart shows the majority of the 5,679 acre watershed is relatively undeveloped, residential, agricultural, and transportation land uses make up approximately 12% of the watershed. Increases in stormwater runoff, and waterbody nutrient loads can often be attributed to these types of land uses.



Background

Healthy, well-balanced stream communities may be maintained with some level of human activity, but excessive human disturbance may result in waterbody degradation. Human stressors may include increased inputs of nutrients, sediments, and/or other contaminants from watershed runoff, adverse hydrologic alterations, undesirable removal of habitat or riparian buffer vegetation, and introduction of exotic plants and animals. State water quality standards are designed to protect designated uses of the waters of the state (*e.g.,* recreation, aquatic life, fish consumption), and exceedances of these standards are associated with interference of the designated use.

Methods

Surface water sampling was conducted to determine the health of Harvey Creek and met the collection and analysis requirements of the Florida Department of Environmental Protection (FDEP).

Results

Nutrients

The nutrient thresholds and results are found in Table 1. According to FDEP requirements, Numeric Nutrient Criteria (expressed as an annual geometric mean) cannot be exceeded more than once in a three year period. The State criteria were not exceeded for either parameter.

Table1. FDEP's total nitrogen and phosphorus criteria for streams applied to Harvey Creek.

Harvey Creek	Total Nitrogen Threshold 1.03 mg/L	Total Phosphorus Threshold 0.18 mg/L
2006	0.11	0.00
2007	0.17	0.00
2008	0.15	0.00
2009	0.15	0.00
2010	0.33	0.00
2011	0.43	0.01
2012	0.39	0.00

Harvey Creek	Total Nitrogen Threshold 1.03 mg/L	Total Phosphorus Threshold 0.18 mg/L
2013	0.21	0.00

Fecal Coliforms

As Figure 1 shows, fecal coliform levels exceeded the Class III water quality standard daily limit (400/100 mL in at least 10% of the samples) 57% of the time over the sampling period. Since the watershed is relatively undeveloped, elevated fecal levels are probably the result of wildlife in the area. FDEP is currently in the process of revising their bacterial standards and it is hoped that the proposed indicator organism (*E. coli*) as well as microbial source tracking can give staff a more reliable indicator and help to determine the source of the fecal coliform bacteria.

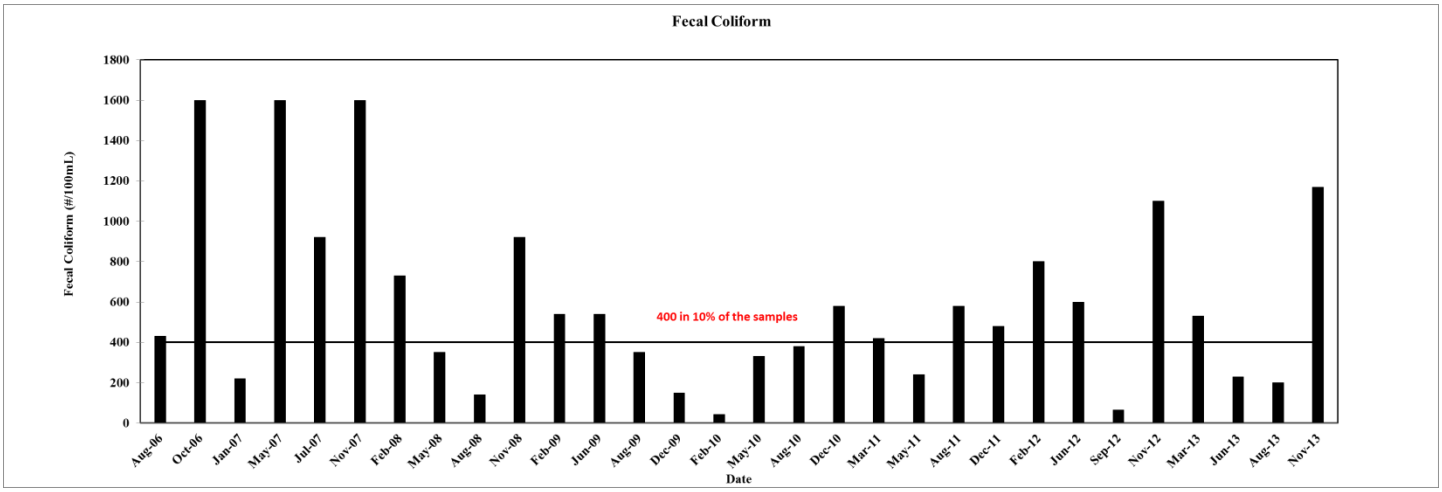


Figure 1. Fecal coliform levels (2006-2013).

Metals

Harvey Creek lead levels exceeded Class III water quality criteria during the 3rd quarter. Due to the natural soil characteristics of these watersheds, lead from relict anthropogenic sources can migrate relatively easily through the soil, leaching into the surface waters. These surface waters are more susceptible to even low levels of lead due to lead's bioavailability at the stream's normally low pH levels.

Click here for more information on metal levels in Leon County waterbodies.

Conclusions

Based on ongoing sampling, Harvey Creek met the nutrient thresholds for the Big Bend Bioregion. Fecal coliforms exceedances have continued with the latest occurring in November 2013. Lead exceeded Class III water quality criteria in 2013. Other water quality parameters appear to be normal.

Thank you for your interest in maintaining the quality of Leon County's water resources. Please feel free to contact us if you have any questions.

Contact and resources for more information

www.LeonCountyFL.gov/WaterResources

Click here to access the results for all water quality stations sampled in 2013.

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